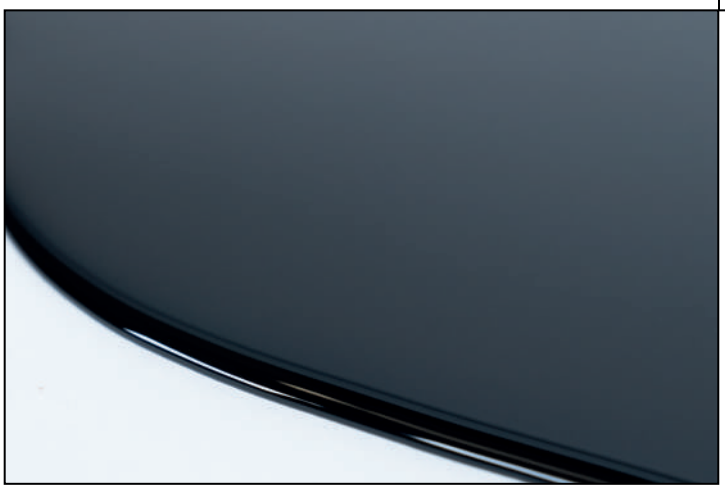
FLEXSOL®
OUTSTANDING DURABILITY

DATA SHEET

GENERAL INFORMATION

Description: Liquid urethane elastomer for repairing and protecting rubber and metal equipment exposed to abrasion, impact, vibration, and expansion/contraction, allowing return to operation in just 1 hour.



Product Features: Fast curing (60 minutes) at 25°C (77°F). Excellent adhesion to metal and rubber. Flexible, easy-to-apply coating that allows resuming operation in just 1 hour.

Main Use: Repair of steelcord and textile conveyor belts, protection of mechanical splices and fasteners, coating of crusher load trays, large cracks in coal fuel lines, protection of elbows, extractors, chutes, and screens. Coating of chutes, mills, pieces exposed to acidic environments, among others.

PHYSICAL PROPERTIES

The technical data should be considered only as representative and does not represent a warranty of the product.

PHYSICAL PROPERTIES	AVERAGE VALUES	UNIT	METHOD
Hardness (25°C/77°F)	80 - 90	SHORE A	ASTM D2240
Modulus 100% (25°C/77°F)	10.3 / 1500	N/mm² / PSI	ASTM D412
Modulus 300% (25°C/77°F)	19.3 / 2800	N/mm² / PSI	ASTM D412
Tensile strength (25°C/77°F)	46 / 6672	N/mm² / PSI	DIN 53 504
Tear strength (25°C/77°F)	101686 / 900	N/mm / PLI	DIN 53 507
Elongation (25°C/77°F)	450	%	DIN 53 504
Abrasion resistance (25°C/77°F)	45 / 0.0027	mm³ / In³	DIN 53 516
Adhesion to rubber (25°C/77°F)	22.5 / 3263	N/mm² / PSI	ASTM D429-08
Adhesion to metal (25°C/77°F)	22.0 / 3.19	N/mm² / PSI	ASTM D429-14e1
Toxicity index of combustion products	2.61 CO_2, CO, NO_2, NO	% Quantitative	ASTM D429-14e1

BERTECH®
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OTHER PHYSICAL PROPERTIES

PHYSICAL PROPERTIES	AVERAGE VALUES	UNIT
Pot life (25°C/77°F)	8	MINUTES
Functional curing time (25°C/77°F)	45 - 60	MINUTES
Total curing time (25°C/77°F)	48	HOURS
Recoating time (25°C/77°F)	1 - 2	HOURS
Volume by weight for components A+B	90	%
Solids by weight for components A+B	90	%
Specific gravity for component A+B	1.03 / 0.0372	g/cm³ / lb/in³
Specific volume	0.97 / 26.85	cm³/g / in³/lb
Maximal temperature resistance (humid)	70 / 158	°C / °F
Maximal temperature resistance (dried)	150 / 302	°C / °F
Coating coverage per kit 730g (1.61 lb)	(1,830 x 8 x 50) mm / (72.05 x 0.31 x 1.97) inch	VOLUME

CHEMICAL RESISTANCE

Chemical resistance was calculated with the product cured at 25°C (77°F) for 7 days, and 30 days of immersion.

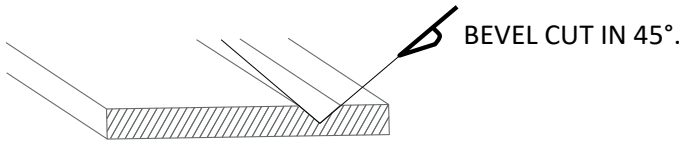
CHEMICAL	PERFORMANCE
1,1,1-Trichloroethane	Very Good
Acetic acid 10%	Poor
Benzene	Very Good
Gasoline (lead free)	Fair
Chloridric acid 10%	Good
Methanol	Good
Ethyl methyl ketone	Very Good
Methylene chloride	Fair

CHEMICAL	PERFORMANCE
Nitric acid 50%	Fair
Phosphoric acid 10%	Fair
Potassium hydroxide 40%	Poor
Sodium hydroxide 50%	Poor
Sodium hypochlorite	Fair
Sulfuric acid 10%	Fair
Toluene	Good
Trisodium phosphate	Good

RUBBER SURFACES PREPARATION

1. Scrape the surface on and around the damaged area with an electric wire brush at low rotation speed (4.800 to 5.600 r.p.m).

1.1 In areas with thickness greater than 3mm (0.12 in), a bevel must be cut (45° cut) around the edges of the damage, in order to leave a larger contact surface between the rubber and the resin (see scheme below). Then proceed with the surface scraping. In the event of passing through rips, in addition, perform the same procedure in the bottom cover.



2. After obtaining a porous surface, remove all loose pieces of rubber and dust from the surface to be repaired. In this step, use the brush included in the kit or an industrial blower.

3. Apply Flexsol® Cleaning Solvent (bottle n° 1) throughout the previously prepared area. Once it is dry, apply the Flexsol® Rubber Primer (etching agent bottle n°2). Both components are included in the kit.

NOTES

Once the Primer has been applied, you will only have 15 minutes to apply the mixture (Resin + Catalyst). If this time is exceeded, apply another coat of Primer, and let it dry.

METAL SURFACES PREPARATION

1. Sandblast surface with 8-40 grit or abrasive disc until white metal appears. Desired profile is 3-5 millimeters, including sharp edges.

2. Apply Flexsol® Cleaning Solvent (bottle n° 1) to remove all traces of oil, grease, dust, or any other substances from the grit blasting and let it dry.

3. Pour the entire content of Flexsol® Metal Primer B into the bottle of Flexsol® Metal Primer A. Then close the lid and mix thoroughly by shaking the bottle for 30 seconds.
NOTE: Once both components are mixed, you will have 1 hour of pot life at 25°C (77°F).

4. To prime the surface, apply a uniform coat of the Flexsol® Metal Primer mixture and allow to dry for 20 minutes.
NOTE: When applying at room temperatures below -5°C (23°F), let it dry for 30 minutes.

MIXING AND APPLICATION PROCEDURE

1. Pour the entire content of the Flexsol® Catalyst (bottle n° 3) into the Flexsol® Resin and using a stirring paddle (included in the kit) mix thoroughly for one minute.

2. Once a homogeneous mixture is obtained, pour it over the damaged area until it is entirely covered. Use a spatula to spread and smooth the product according to needs.

3. At 25°C (77°F) wait 45 minutes to 1 hour. After this time, the product will set and harden and the equipment will be ready to get back to service.
Caution: For other temperatures check the table available on page 5.

NOTES

The Resin tends to crystalize at low temperatures. If this happens, you must heat the plastic container until it reaches a liquid state, similar to paint.

FOR TEARS, HOLES OR PASSING THROUGH DAMAGE

In case of passing through rips (i.e., holes), it is recommended to use a non-stick PVC sheet. In this situation, apply the Flexsol® Solvent and the Flexsol® Primer on the top and bottom cover.

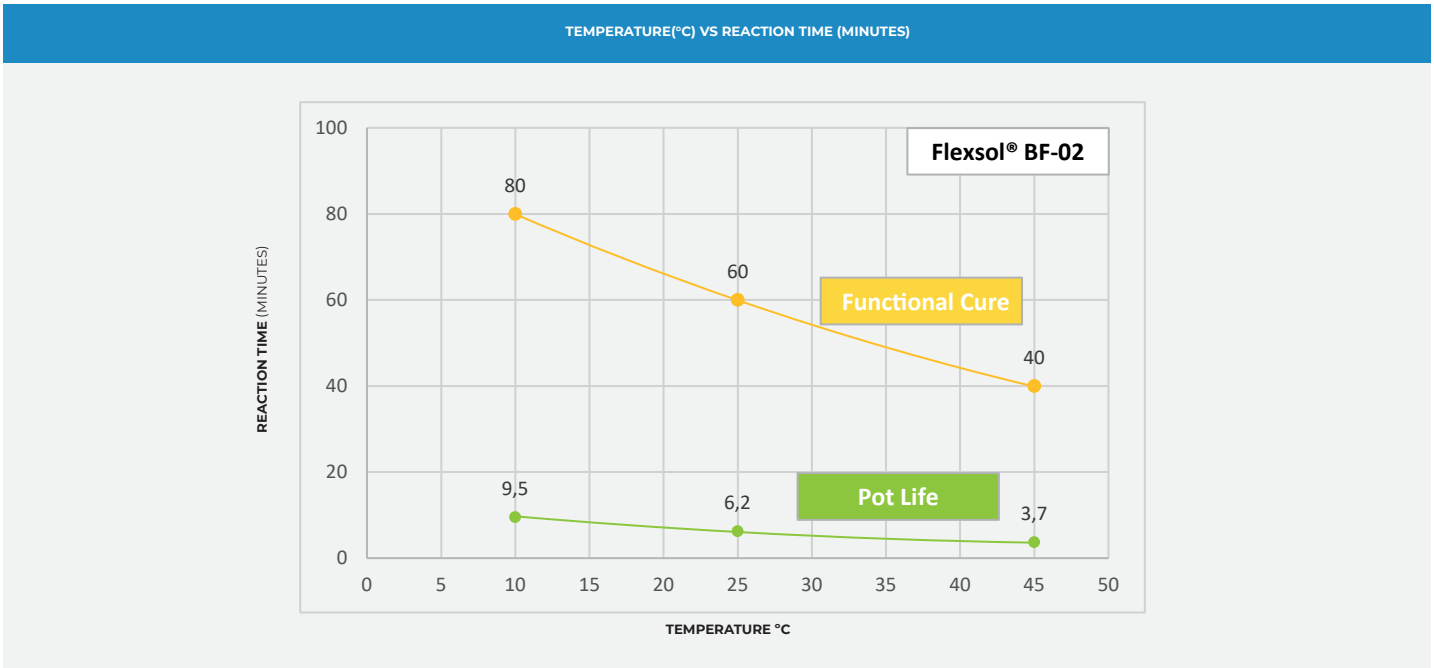
1. Place the non-stick PVC sheet in the bottom cover and install using a staple gun.

2. Pour the mixture in the damaged area.

3. Once the resin has hardened, remove the PVC sheet using your hands (staples will come off easily).

CURE TIME

Reaction times relative to room temperature of **Flexsol® BF-02** are shown below:



STORAGE

Store at room temperature between 20°C (68°F) and 30°C (86°F).

CAUTION

Read the Material Safety Data Sheet of the chemical product (MSDS) before using it.

ADDITIONAL INFORMATION

The information in this document is updated in accordance with current knowledge of this product and in accordance with the laboratory testing carried out. This information does not represent a guarantee of the properties mentioned in this document.

FOR INDUSTRIAL USE ONLY